

AIR LINE KIT
AL-951
OPERATION MANUAL

OM-K0181E

① PRECAUTIONS FOR USE

- 1) Use compressed air.
- 2) Use the air pressure less than 9.9kgf/cm^2 (0.99Mpa).
- 3) Install Air Line Kit vertically at a place where less shake and vibration.
- 4) Polycarbonate is used in the air line kit so that do not use the chemicals such as thinner, chloroform, trichloroethylene, acetic ester, sulfuric acid, alkalic solution, or in such atmosphere.

② FEATURES

- 1) Air filter eliminates the moisture and impurities in the compressed air.
- 2) Air regulator provides accurate and steady air pressure.
- 3) The lubricator supplies compressed air with misted lubricant into an air motor and makes smooth lubrication which extend the service life of the air motor a great deal.
- 4) Automatic drain mechanism drains the trapped water in the air filter automatically.
- 5) Alarm buzzer for oil shortage can be connected to the lubricator.

[3] SPECIFICATIONS

Max. Working Pressure	9.9kgf/cm ² 0.99Mpa)
Security Withstand Pressure	15kgf/cm ² (1.5Mpa)
Liquid Temperature	5~65° C

AIR FILTER

Filtering Degree	5 μm
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AIR REGULATOR

Set Pressue Range	0.3~8.5kgf/cm ² (0.03~0.8Mpa)
Releaf Pressue	Set Pressure+1.2kgf/cm ² (0.12Mpa)

LUBRICATOR

Lubircant	Shell Ondina Oil #15 or Turbine Oil Class 1, ISO VG15 (Do not use spindle oil)
Store Oil Volume	220cm ²
Minimum Drip Rate	30 ɿ

SOLENOIDE OPERATED VALVE

Working Pressure Difference Range	6.0kgf/cm ² (0.6Mpa)		
Insulation Class	B Class		
Valve Seat Leakage	Max. 0.2cm ³ /min		
Rated Voltage	DC 24V		
		50Hz	60Hz
Rated Power	Maintenance	7.5VA	5.5VA
	Starting	20VA	17VA
Power Consumption	6.5W		

ALARM BUZZER

Power Source Voltage	AC/DC 24V
Sound Pressure	80 Horn

4 NOMENCLATURE

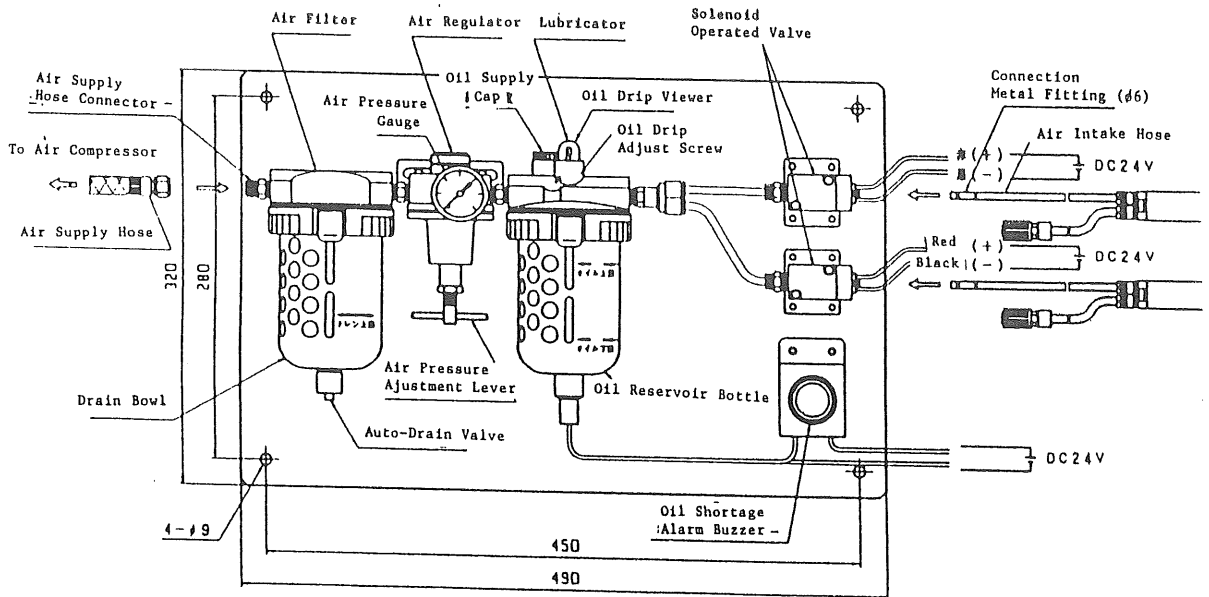


Fig. 1

5 FUNCTION OF EACH PART

① AIR FILTER

Dusts and moisture in the compressed air are separated and they are trapped in the plastic drain bowl. When trapped water reaches to the upper limit of plastic drain bowl, the water is drained through Automatic Drain Valve automatically. Connect a lead hose to Automatic Drain Valve if it is not favourable to drain there directly.

② AIR REGULATOR

The adjustment of air pressure is controlled by Air Pressure Adjustment Lever located on the lower part of Air Regulator. Turning the lever clockwise increases the air pressure so that adjust the air pressure by watching the air pressure gauge.

③ LUBRICATOR

When supplying oil, confirm if the air supply from the air compressor is stopped and remove Air Supply Cap turning it counter-clockwise. Supply the oil provided (Shell Ondina Oil #15) upto the upper limit of Oil Reservoir Bottle. When the oil in Oil Reservoir Bottle is short, buzzer alarms the oil shortage. Then, supply oil in the manner mentioned above.

④ SOLENOID OPERATED VALVE

Two port directly operated solenoid valve (Open-type Valve when current flows) is used. It starts working when connected to DC 24V.

CAUTION: The voltage allowance is $\pm 10\%$ of rated voltage.

⑤ OIL SHORTAGE ALARM BUZZER

When the oil in lubricator is short, Alarm Buzzer rings if the lubricator is connected to DC 24V.

⑥ INSTALLATION

- ① When the installing surface is flat, install the basement plate vertically with M8 bolt by attaching the spacer provided on the reverse side of the basement plate. (Fig. 2)

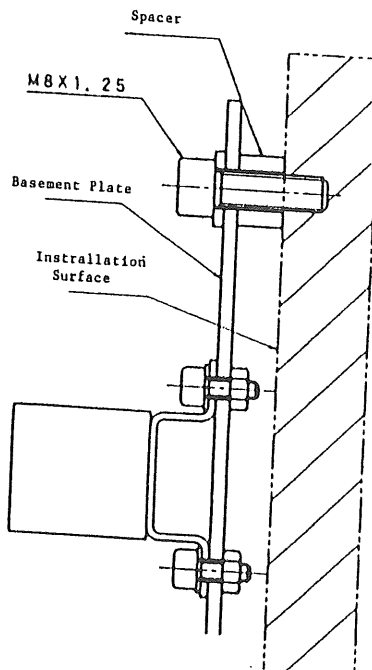


Fig. 2

- ② When installing air motor, confirm if the metal fitting ($\phi 6$) is attached on the air intake hose before inserting it into the solenoid operated valve.

CAUTION: Quick Disconnect Joint for $\phi 6$ hose is provided with solenoid operated valve.

- ③ Connect the wire from solenoid operated valve to the equipment that can distribute DC 24V.
(In case solenoid operated valve is connected to NC lathe, connect it to M-signal output power of DC 24V.)
- ④ Connect the wire of Oil Shortage Alarm Buzzer to DC 24V.
- ⑤ Connect Air Supply Hose to Air Supply Hose Connector on Air Filter.
- ⑥ Supply compressed air from the air compressor and adjust the air pressure to $3\sim 6\text{kgf/cm}^2$ with Air Pressure Adjust Lever on the air regulator.
- ⑦ To adjust the oil supply rate from the lubricator, run the air motor and turn Oil Drip Adjust Screw counter-clockwise in full position. Turn Oil Drip Adjust Screw to count 25~35 drops per minute watching it through Oil Drip Viewer. In case two air motors are operated at a time, set oil drip rate to 55~65 drops per minute.

DANGER

1. Make sure the connection of hose is made firmly. The hose will jump around when it is disconnected during the operation that is very dangerous.
2. The maximum working pressure of Air Supply Hose to air compressor is 10kgf/cm^2 . Therefore, make sure if the air pressure from air compressor is less than 10kgf/cm^2 before supplying compressed air.

7 CHECK UP OF AIR SYSTEM

① Oil Drip Adjustment

Adjust the oil drips according to the specification required for the motor. Turning counter-clockwise increases the oil drop rate and turning clockwise decreases the oil drop rate. (Fig. 3)

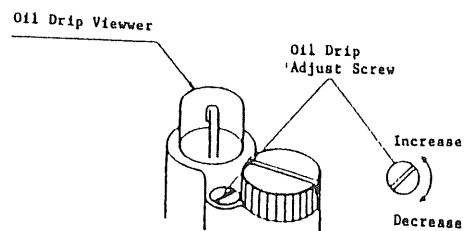


Fig. 3

② Oil and Water Trap Drain from Oiler

Turn Oil Drain Valve located on the bottom of Oil Reservoir Bottle counter-clockwise and drain the oil and exchange with new oil at least once a month since the water trapped in the Oil Reservoir Bottle creates the cause of malfunction.

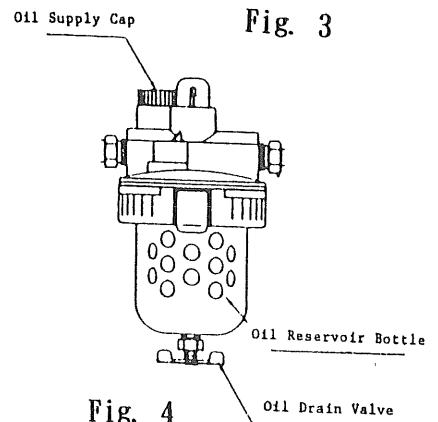


Fig. 4

For the improvement, specification may be changed without notice.